

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021668**Date Inspected:** 10-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Bao Qian

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14.

This QA Inspector observed ZPMC welder Mr. Zhao Guanglin, stencil 044779 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair-1 to make OBG segment 14E repair welds SEG3019E-2-159 and 158. ZPMC QC informed this QA Inspector that weld repair document B-WR-20332 documents these weld repairs. This QA Inspector observed a welding current of approximately 150 amps, the base materials were preheated with a torch and Mr. Zhao Guanglin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs to OBG segment 14E welds SEG3019E-2-167 and 147. ZPMC QC informed this QA Inspector that weld repair document B-WR-20332 documents these weld repairs. This QA Inspector observed a welding current of approximately 160 amps, the base materials appear to have been preheated with a torch and Mr. Yang Yunfeng appeared to be certified to make this

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weld. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-B-P-2213-TC-U4B-FCM-1 to make OBG segment 14E welds SEG3019N-1-133, 135, 137 and 157. This QA Inspector observed a welding current of approximately 160 amps and Mr. Wang Zhengbin appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Kuai Wenshan, stencil 054013 used shielded metal arc welding procedure WPS-B-P-2213-TC-U4B-FCM-1 to make weld OBG segment 14E welds SEG3019N-1-107, 109 and 110. This QA Inspector measured a welding current of approximately 165 amps, base material was preheated with an electrical heater and Mr. Kuai Wenshan appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Zujun, stencil 052696 used flux cored welding procedure WPS-B-T-2133-ESAB to make OBG segment 13AE welds SEG3013A-001-081 and 082. This QA Inspector measured a welding current of approximately 260 amps and 25.0 volts. This QA Inspector observed Mr. Li Zujun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Fong Youjun stencil 066416 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 14E weld DP3161-001-383. ZPMC QC informed this QA Inspector that this weld repair was to repair visual rejections. This QA Inspector observed a welding current of approximately 170 amps, the base materials appear to have been preheated with a torch and Mr. Fong Youjun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 14E weld SEG3007N-034. This QA Inspector measured a welding current of approximately 290 amps and 26.5 volts. This QA Inspector observed Mr. Zhu Jibo appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

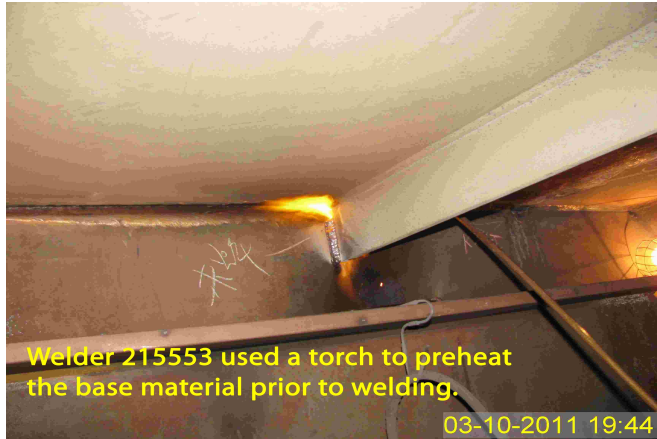
This QA Inspector observed ZPMC welder Mr. Yuan Wensong, stencil 055491 used flux cored welding procedure WPS-B-T-2231-ESAB to make OBG segment 13AE welds SEG3007AH-039, 087, 097 and 107. This QA Inspector measured a welding current of approximately 310 amps. This QA Inspector observed Mr. Yuan Wensong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Wanyong stencil 050242 used flux cored welding procedure WPS-B-T-2231-ESAB to make OBG segment 13AE weld SEG3007AH-037, 095, 105 and 164. This QA Inspector measured a welding current of approximately 280 amps, and 30.4 volts. QA Inspector observed the maximum welding voltage listed in the welding procedure specification is 26.6 volts and Mr. Wu Wanyong had a

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welding current that was approximately 3.8 volts above this maximum limit. This QA Inspector showed ABF CWI Mr. Bao Qian the welding meter and he had the welding machine adjusted to have a voltage of approximately 26.0 volts. Following adjustment of the welding machine, items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer
